Support For
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ZX81 - spectrum - QL
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TIMEX sinclair
1000 - 1500 - 2068
computers

TIMELINEZ

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TIMEX/sinclair User Group News-Magazine

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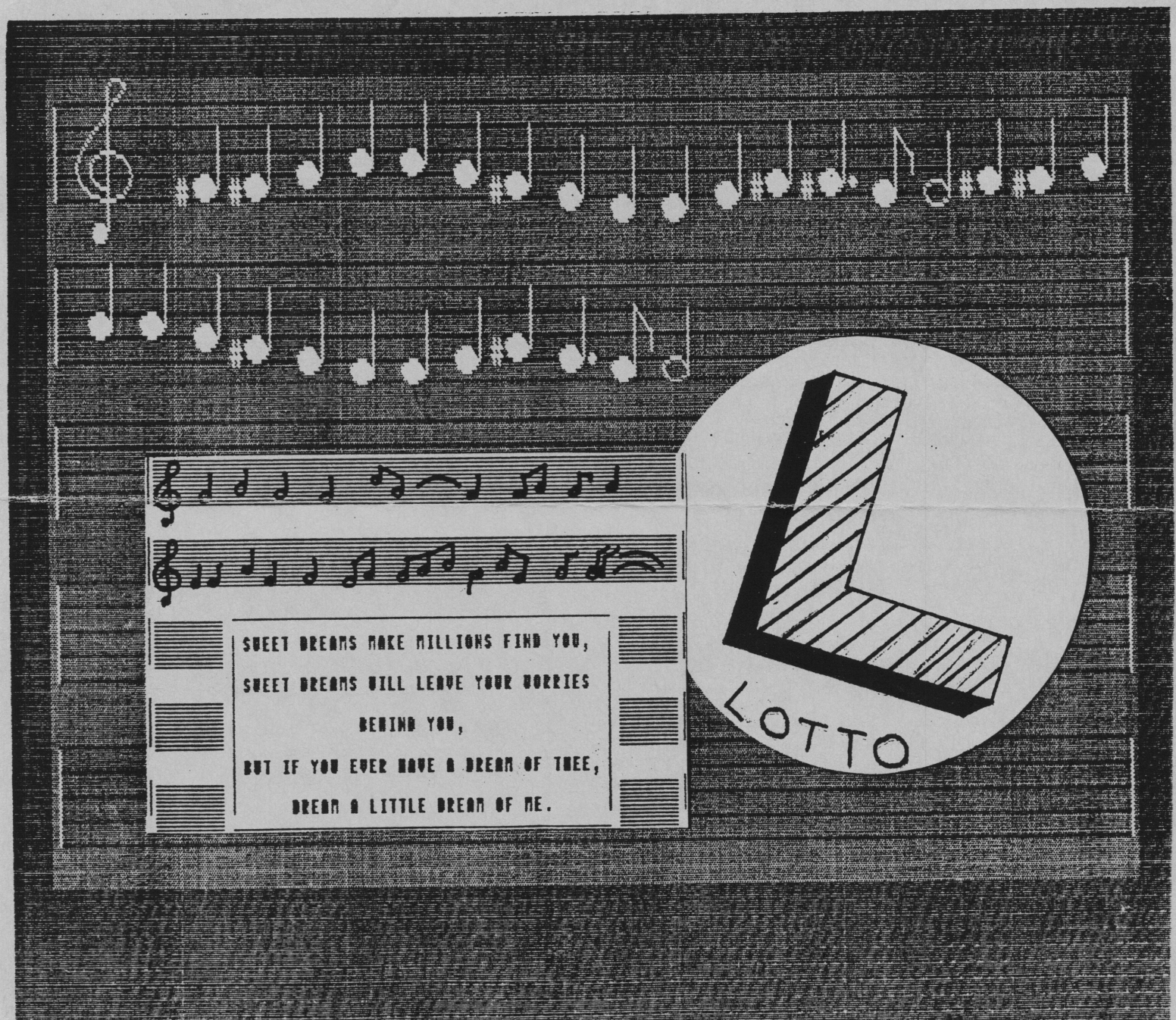

TIMELINEZ

TIMEXsinclair user group News-Magazine

-TS/PUG
-GUTS/SV
-ST/EBZUG
-TAS-BAM,Inc.

FRONT PAGE

PRINTED USING sinclair QL PROFFESIONAL COMPUTER AND THIS PROGRAM.

DESK-TOP PUBLISHING FOR THE SINCLAIR QL

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Issues 1/88 - present, contact your editor at **American Micro.**

The PDSE Library is now available to all; covering T/S1000-1500, T/S 2068, Spectrum and the QL.
Contact **American Micro** for further details.

LETTER/S TO/FROM THE EDITOR/S

Here starts a new column for our members and subscribers. With this addition, we are trying to move **TIMELINEZ** just a bit from being classified as "a club news letter", but not quite as far as an "official" magazine (**TIME DESIGN**™ is better apt for that). What is our goal? Put simply, we find that there are many user groups across America for some reason or another do not have their own news-letter. The reasons range from the size of the club to a lack of interest, or funds (huh, kinda sounds familiar). Our objective is to become a single combined news-letter to user groups across the nation that do not have their own. Basically, all the subject user group needs to do is submit a list of activities pertaining to fairs, meetings, workshops, etc. and an article or two. This way, the club isn't "put-out" by the troubles that prevented them from publishing their own. As you can see this plan of action is rather infant staged at present. **TIMELINEZ** just started experimenting with this. If you notice the User-Group Info, last page, a new group has joined our realm. TAS-BAM, Inc. is trying us out since they haven't had their news-letter KEYBOARDS for some time now. So, when information is provided, they will have a page titled KEYBOARDS. We are also in contact with S.U.G. of Depew, NY and are awaiting their approval. If as many as 5 or 6 clubs combine their resources for this publication, just imagine the amount of information we'll learn together.

All this brings to mind another topic. You have probably noticed that SincLink is extreemly small this issue. Well, to project what was said above, Bill Miller is trying to create a different type of font/format that will permit better ease of viewing. SincLink does provide us with some interesting information,

```
880901.1344;; 190 WORDS;;
 (S)LIX;; (F)ormat;;
Filename:: sf88 (sk8803)
 (1_Page);;
--------------------------------
SLIX File & Record Format 88::..
* SLIX Files begin with a
 'Header Record' in the form::
 'Time Stamp Field'
 (YYMMDD.HHMM- Time of last
 update);; 'File Size Field';;
 'System Indicator Field';;
 'File Type Field';; 'File Name
 Field' (with previous File
 Name(s)) and (number_of_Pages
 (sub files));; 'File Width
 Field' (Dashes indicate number
 of characters wide the file
 is);; 'File Description Field..
* Records begin with an asterisk
 and are delimited by one blank
 line before and after..
Indent one space for lines
 belonging to the same paragraph
 (field)..
Fields are delimited by double
 punctuation marks::
** Double periods mean 'end of
 paragraph or field'..
** Fields starting with
 asterisks force a 'new line'..
** Double colons mean 'a list
 follows'..
** Double semi-colons are the
 usual field delimiter for
 predefined records..
** Double ampersands indicate
 the following field is the last
 field in the current list &&
** The last record in the file
 has the form:: 'File Width
 Field';; 'Time Stamp Field'
 (Time file was started);; 'File
 Name Field';; 'END' Field..
```

however, there are two features that many have complained about. As you can see, from what I just mentioned, Bill is working on one of them and that's the size of the print. The second is all the coding which is through-out SincLink. Many are confused and just do not understand what "880901.1401;; sc8809;; END...." or "ts88630e 66 880803.161016752 5201013000000000000000000000000" really means. So Bill has provided us with the above to help us out.

DEADLINE FOR NEXT ISSUE IS:
--->>> NOVEMBER 13, 1988 <<<---

EPROMs ARE ALIVE AND WELL....

and living in Redwood City.

Well alive yes - but not moving too swiftly. Burning a program into an EPROM, headers needed for auto run, and hardware requirements have all been worked out. Now EPROM applications are needed.

EPROMs can replace the internal ROM(s) to provide corrections, customization, and expansion of the computer's operating system. Replacing the internal ROMs with EPROMs require some rewiring but all the internal ROMs are in sockets. Unfortunately, the TS1500 ROM is in a 24 pin socket which does not lend itself to replacement by EPROM.

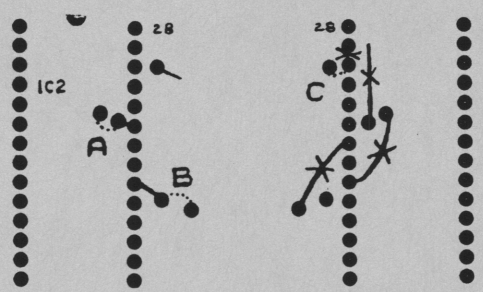
Application programs can be run directly in the EPROM if certain conditions are met. These conditions include: all variables must be in RAM, the code must run at EPROM addresses, and of course the number of bytes must fit in the EPROM. Copying the program from EPROM to RAM overcomes these restrictions but uses up RAM space.

ZX81/TS1000:

Devices such as ROMPAK adapt the rear expansion bus for an 8K EPROM. The external 8K EPROM cannot be used if an internal 16K EPROM has been installed (see below) as it uses the same memory area.

Machine code can be run in EPROM but BASIC programs must be copied into RAM.

The internal 8K ROM is in a 28 pin socket so a 8K or a 16K EPROM can be installed. Four traces must be cut and three jumpers must be installed. (See figure below.)



COMPONENT SIDE SOLDER SIDE

ABC= jumper X = cut trace
(Jumper C connects to pin 26.)

ZX81 CHANGES FOR EPROM.

TS1500:

Timex designed the TS1500 for auto load program cartridges. If the transistor on a ROMPAK is removed, the ROMPAK can work like an auto load cartridge. A 136 byte header on the EPROM is required for autoload. The program must be in BASIC and 8056 bytes or less. The BASIC program is copied into RAM.

TS2068:

There are two internal ROMs in the TS2068, the HOME ROM and the XROM (extension ROM). The HOME ROM is 16K bytes with only 36 bytes unused.

The XROM is 8K in a 28 pin socket. Because it operates in its own bank, you have a choice of replacing it with an 8K, 16K, or 32K EPROM.

TS2068 cartridge requirements have been well documented. BASIC programs on cartridge run by copying only one line at a time into RAM. This frees up RAM memory for other uses.

My current projects include modem to modem transfer of code from one computer to another and writing short machine code functions and utilities.

The modem to modem transfer will permit moving programs from a TS1500 to a TS2068 for making auto load EPROMS for the TS1500. The T2068 has an assembler and a monitor to add the header.

I have modified a TS2068 for internal EPROMs. Adding short machine code routines extends the keywords without using any RAM memory. These extensions can be used from BASIC, machine code, or in the command mode.

My HOME EPROM has been changed so if the keyword STEP is entered followed by a number (0-255), the program jumps to a routine in an XROM EPROM. I currently have about 50 such routines and am adding more. The routines will have to average less than 40 bytes each to allow all 256 routines to fit in the space available.

If I can help with one of your projects send a SASE to:

Bob Orrfelt
3436 Bay Road,
Redwood City, CA 94063

or call (415) 369-9163

WELCOME TO THE SINCLAIR LOTTO SIMULATOR

On June 4, 1988 Lotto fever hit CA. The jackpot reached over $50 MILLION. Could YOU have won? Play SLS and see. All you need is a T/S 2068, time & L U C K.

```
  10 REM  This program can be
     compiled using TIMACHINE.
  14 REM Program by George
     Mockridge 8/88.
  18 REM INT +p(),r(),i,j,k,c,pl
ays,p,beep
  22 REM ! OPEN #
  23 LET c$="                "
  24 RANDOMIZE 0
  25 LET n=0: LET net=0: LET pic
k3=0: LET pick4=0: LET pick5=0
  26 INK 9: BORDER 4: PAPER 5: L
ET beep=0: CLS : GO SUB 30: GO T
O 38
  30 PRINT AT 0,9;"WELCOME TO TH
E"
  34 PRINT AT 1,5;"SINCLAIR LOTT
O SIMULATOR": RETURN
  38 PRINT AT 3,0;"On June 4, 19
88 Lotto fever hit","CA.  The ja
ckpot reached over","$50 MILLION
. Could YOU have won?";AT 6,0;"P
lay SLS and see.  All you need",
"is a T/S 2068, time & L U C K."
  42 PRINT AT 21,0;"PLEASE ENTER
 YOUR FULL NAME": INPUT n$
  43 PRINT AT 20,0;"IS THIS A CO
NTINUATION OF A";AT 21,0;"PREVIO
US GAME? (y or n)     ": LET p$=I
NKEY$: IF p$<>"y" AND p$<>"n" TH
EN GO TO 43
  44 IF p$="y" THEN GO SUB 300
  46 PRINT AT 19,0;"How many $1
tickets do you want";AT 20,0;"to
 buy for each twice-a-week";AT 2
1,0;"drawing?  (ENTER 1-5)
": INPUT plays
  47 IF plays<1 OR plays>5 THEN
GO TO 46
  48 CLS : GO SUB 30
  49 DIM p(5,6): FOR i=1 TO 5: F
OR j=1 TO 6: LET p(i,j)=0: NEXT
j: NEXT i: FOR i=1 TO plays
  50 PRINT AT 16,0;"You may now
pick 6 different"
  54 PRINT AT 17,0;"no.s between
 1 and 49 for play ";i
  66 FOR j=1 TO 6
  70 PRINT AT 21,0;"ENTER PICK N
O. ";j
  74 INPUT p
  78 IF p<1 OR p>49 THEN FLASH 1
: PRINT AT 17,5;"between": FLASH
 0: GO TO 74
  82 FOR k=1 TO 6
  86 IF p=p(i,k) THEN FLASH 1: P
RINT AT 16,19;"different": FLASH
 0: GO TO 74
  90 NEXT k
  94 LET p(i,j)=p
  98 PRINT AT 19,j*3-3;p(i,j)
 102 PRINT AT 16,19;"different";
AT 17,5;"between"
 103 NEXT j
 104 PRINT AT 3,0;n$: FOR k=1 TO
 6: PRINT AT i+4,0;"Your play";i
;" #'s";AT i+4,12+k*3;p(i,k): NE
XT k
 105 NEXT j
 106 PRINT AT 19,0;c$: NEXT i
 110 PRINT AT 16,0;c$;AT 17,0;c$
;AT 21,0;c$
 114 PRINT AT 21,0;"(c)COPY (b)B
EEP ON/OFF (s)STOP"
 115 IF INKEY$="c" THEN COPY
 116 IF INKEY$="s" THEN : BEEP 1
,1: STOP
 117 IF INKEY$="b" THEN LET beep
=ABS (beep-1): BEEP 1,1
 126 DIM r(6): FOR k=1 TO 6
 128 REM Lines 129-133 are an
attempt to generate a true
random no.To see a win sequence,
change 49 to 6 in line 132.
Choose 1-6 for pick1 #'s.
 129 LET ns=n: IF COS (ns*k)=0 T
HEN LET ns=RND
 130 LET ns=ABS (SIN (n*k)/COS (
ns*k)): LET ns=ns-INT ns
 131 LET nr=RND
 132 LET r=ns+nr: LET r=r-INT r
 133 LET r=INT (r*49+1)
 134 FOR l=1 TO 6
 138 IF r=r(l) THEN GO TO 129
 142 NEXT l
 146 LET r(k)=r: NEXT k
 150 PRINT AT plays+5,0;"Winning
 no.s";AT plays+5,15;c$;: INVERS
E 1: FOR k=1 TO 6: PRINT AT play
s+5,k*3+12;r(k);: NEXT k: INVERS
E 0
 152 LET n=n+1: LET net=net+play
s
 153 FOR i=1 TO plays
 154 LET c=0
 158 FOR k=1 TO 6
 162 FOR j=1 TO 6
 166 IF r(k)=p(i,j) THEN LET c=c
+1: GO TO 174
 170 NEXT j
 174 NEXT k
 178 IF c=3 THEN LET pick3=pick3
+1: LET net=net-5
 182 IF c=4 THEN LET pick4=pick4
+1: LET net=net-50
 186 IF c=5 THEN LET pick5=pick5
+1: LET net=net-5000
 190 PRINT AT plays+7,0;"You hav
e wagered $";plays;" twice a wee
k";AT plays+8,0;"for ";INT (n/10
4);" yrs. & ";INT ((n-INT (n/104
)*104)/2);" weeks. ";AT plays+9
,0;"Your net loss is "
 191 IF net<0 THEN PRINT AT play
s+9,9;"win "
 192 PRINT AT plays+9,17;;"$";AT
 plays+9,18;ABS net;".";c$
 193 PRINT AT plays+11,0;"3/6 ma
tches(pays $5) = ";pick3;AT play
s+12,0;"4/6 matches(pays $50)= "
;pick4;AT plays+13,0;"5/6 matche
s(pays $5K)= ";pick5;: IF c=6 TH
EN GO TO 198
 195 IF c>2 AND c<6 AND beep=0 T
HEN FOR k=1 TO c: BEEP .3,k*k: B
ORDER INT (RND*8): NEXT k: FOR k
=1 TO 150: BORDER INT (RND*8): N
EXT k: PRINT #1;AT 0,0;c$: PRINT
 #1;AT 1,0;c$
 196 NEXT i
 197 GO TO 115
 198 INVERSE 1: FLASH 1: PRINT A
T 4,0;"YOU WIN   $50 MILLION   Y
OU WIN ": FLASH 0 : INVERSE 0
```

```
 202 PRINT AT 21,0;"Press any ke
y to turn off alarm."
 206 BEEP .5,20: BEEP .5,10
 210 IF INKEY$="" THEN GO TO 206
 214 PAUSE 25: PRINT AT 19,0;"Wh
o is best? Make a screen copy.";
AT 20,0;"Mail to TIMELINEZ PO BO
X 1312";AT 21,0;"PACIFICA, CA 94
044  -  Be Honest"
 215 STOP
 300 PRINT AT 20,0;c$;AT 21,0;c$
 304 PRINT AT 21,0;"ENTER NUMBER
 OF YEARS PLAYED.": INPUT y
 305 PRINT AT 21,0;"ENTER NUMBER
 OF WEEKS PLAYED.": INPUT w: LET
 n=y*104+w*2
 307 PRINT AT 21,0;"ENTER NET LO
SS (<WIN>) TO-DATE.": INPUT net
 310 PRINT AT 21,0;"ENTER NO. OF
 3/6 MATCHES TO-DATE": INPUT pic
k3
 312 PRINT AT 21,0;"ENTER NO. OF
 4/6 MATCHES TO-DATE": INPUT pic
k4
 314 PRINT AT 21,0;"ENTER NO. OF
 5/6 MATCHES TO-DATE": INPUT pic
k5
 319 PRINT AT 21,0;c$
 320 RETURN
```

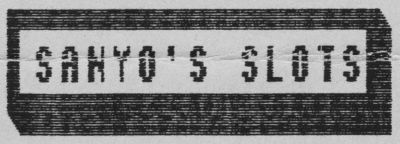
```
        WELCOME TO THE
    SINCLAIR LOTTO SIMULATOR

George Mockridge

Your play1 #'s 7  11 13 23 47 49
Your play2 #'s 21 24 33 35 39 49
Your play3 #'s 1  4  23 45 21 10
Your play4 #'s 17 12 19 40 45 2
Your play5 #'s 3  31 47 20 18 42
Winning no.s   ■■ ■■ ■ ■■ ■ ■■

You have wagered $5 twice a week
for 74 yrs. & 44 weeks.
Your net loss is $29145.

3/6 matches(pays  $5) = 647
4/6 matches(pays  $50)= 31
5/6 matches(pays  $5K)= 1
```



"OH GOSH! IF I COULD ONLY WIN!"

Famous last words from 99.99% of all Lotto player each week. "Well, for some of us, that's just not enough! I like more of a challenge or thrill, I want more control over my money". Quoted like true patriots, so, instead of playing table games, these people end up at the slot machines. For this, thanks goes to Bob Schubel. He patiently converted this program, which originated in the Sanyo forum of CompuServe, from MS/DOS to our own SuperBasic using PC/IMPORTS.

```
10 REMark **  Uploaded to CIS
12/28/86
20 REMark **  Bob Schubel
CIS#71320,262
30 REMark **
100 WINDOW 486,256,0,0:PAPER
0:INK 4:CLS:BORDER 1,255
110 RANDOMISE:DIM Z(6)
120 M=100:CLS:GO SUB 1310
130 CLS:INK 4
140 PRINT\\"   OK ";:INK 7:PRINT
N$;:INK 4:PRINT". Here are the
odds:"
150 INK 2:AT 5,10:PRINT "SYMBOL
HOW MANY     PAYOUT"
160 INK 4:AT 6,10:PRINT
"----------------------------"
170 AT 7,10:INK 2:PRINT "CHERRY
";:INK 7:PRINT" 3          $6.00"
180 INK 2:AT 8,10:PRINT "CHERRY
";:INK 7:PRINT" 2          $3.00
";
181 INK 4:PRINT" LEFT & MID
WINDOWS ONLY!"
190 INK 2:AT 9,10:PRINT "CHERRY
";:INK 7:PRINT"1           $1.50
";
191 INK 4:PRINT"LEFT WINDOW
ONLY!"
200 INK 2:AT 11,10:PRINT "PLUM
";:INK 7:PRINT"3          $20.00"
210 INK 2:AT 12,10:PRINT "ORANGE
";:INK 7:PRINT"3          $50.00"
220 INK 2:AT 13,10:PRINT "*BAR*
";:INK 7:PRINT"3         $100.00"
225 INK 4:AT 14,10:PRINT
"----------------------------"
230 INK 2:AT 15,10:PRINT "
LEMONS ALWAYS LOSE"
240 INK 4:AT 20,5:PRINT "When the
message ";:INK 7:PRINT"PULL
";:INK 4
241 PRINT"appears, press ";:INK
7:PRINT"ENTER ";:INK
4:PRINT"to";:INK 7
242 PRINT" PULL."
250 INK 4:AT 21,5:PRINT "Or type
";:INK 7:PRINT"END ";:INK 4
251 PRINT"to end the session."
260 AT 23,5:PRINT "When you are
ready to begin press ";:INK
7:PRINT"ENTER.";
261 INPUT Z9$
270 L$=CHR$(186)
280 S$=CHR$(205)
290 B$=CHR$(186)
300 DIM W$(4,6)
```

```
310 W$(1)="CHERRY":W$(2)="
":W$(3)="*BAR* ":W$(4)=" PLUM "
320 REMark "WHEEL ONE
330 DIM V$(7,6)
340 V$(1)="ORANGE":V$(2)=" PLUM
":V$(3)="LEMON ":V$(4)="*BAR* "
350
V$(7)="CHERRY":V$(5)="CHERRY":V$-
(6)="CHERRY"
360 REMark "WHEEL TWO
370 DIM V1$(7,6)
380 V1$(1)="*BAR* ":V1$(2)="LEMON
":V1$(3)=" PLUM "
390 V1$(4)="CHERRY":V1$(5)=" PLUM
":V1$(6)="ORANGE":V1$(7)="CHERRY"
400 REMark "WHEEL THREE
410 DIM V3$(5,6)
420 V3$(1)=" PLUM ":V3$(2)="*BAR*
":V3$(3)="CHERRY":V3$(4)="LEMON "
430 V3$(5)="ORANGE"
440 CLS:INK 4
450 Y=16:FOR X=1 TO 18:AT
X,Y:PRINT S$:NEXT X
460 X=18:FOR Y=17 TO 50:AT
X,Y:PRINT B$:NEXT Y
470 Y=51:FOR X=18 TO 1 STEP -1:AT
X,Y:PRINT S$:NEXT X
480 X=1:FOR Y=50 TO 17 STEP -1:AT
X,Y:PRINT L$:NEXT Y
490 REMark "ARM
500 AT 14,52:PRINT "/";
510 Y=52:FOR X=13 TO 8 STEP -1:AT
X,Y:PRINT "//";:Y=Y+1:NEXT X
520 INK 2:FOR X=7 TO 6 STEP -1:AT
X,57:PRINT
FILL$(CHR$(196),3):NEXT X
530 INK 7:AT 13,28:PRINT "P A Y O
U T":AT 14,33:INK 2
540 X=15:FOR Y=24 TO 42:AT
X,Y:PRINT L$
550 FOR X=15 TO 17:AT X,43:PRINT
S$
560 FOR Y=42 TO 24 STEP -1:AT
17,Y:PRINT B$
570 FOR X=17 TO 15 STEP -1:AT
X,23:PRINT S$
572 INK 4:AT 2,26:PRINT'- STEP
RIGHT UP -'
575 AT 3,27:UNDER 1:PRINT ' $3.00
A PULL ':UNDER 0
580 REMark "******LEFT
WINDOW*****
590 INK 7:FOR Y=18 TO 26:AT
5,Y:PRINT L$
600 FOR X=5 TO 7:AT X,27:PRINT S$
610 FOR Y=26 TO 18 STEP -1:AT
7,Y:PRINT B$
620 FOR X=7 TO 5 STEP -1:AT
X,18:PRINT S$
630 REMark "*****MID WINDOW*****
640 FOR Y=30 TO 37:AT 5,Y:PRINT
L$
650 FOR X=5 TO 7:AT X,38:PRINT S$
660 FOR Y=37 TO 30 STEP -1:AT
7,Y:PRINT B$
670 FOR X=7 TO 5 STEP -1:AT
X,29:PRINT S$
680 REMark "*****RIGHT
WINDOW*****
690 FOR Y=41 TO 48:AT 5,Y:PRINT
L$
700 FOR X=5 TO 7:AT X,49:PRINT S$
710 FOR Y=48 TO 41 STEP -1:AT
7,Y:PRINT B$
720 FOR X=7 TO 5 STEP -1:AT
X,40:PRINT S$
730 REMark "DO YOU PULL OR END
740 amt
750 INK 2:AT 22,30:PRINT
"PULL/END ";:INPUT A$:INK 4
760 AT 16,24:PRINT E$;E$;E$;E$;"
"
770 E$="    ":AT 6,19:PRINT
E$;E$:AT 6,30:PRINT E$;E$:AT
6,41:PRINT E$;E$
780 IF A$=="END" OR A$=="E" THEN
GO TO 1280
785 M=M-3:amt
790 REMark " * PICK THE WHEELS
800 FOR I=1 TO 2:Z(I)=RND(1 TO 7)
810 Z(3)=RND(1TO 5)
820 REMark "***** ROLL ALL
WINDOWS AND PICK LEFT *****
830 INK 2:FOR X=1 TO 10
835 FOR Y=1TO 4
837 AT 6,20:PRINT W$(Y)
840 AT 6,31:PRINT W$(Y):AT
6,42:PRINT W$(Y)
845 END FOR Y
847 END FOR X
850 AT 6,20:PRINT V$(Z(1))
860 REMark " ***** ROLL MID AND
RIGHT AND PICK MID *****
870 FOR X=1 TO 15
875 FOR Y=1TO 4
880 AT 6,31:PRINT W$(Y):AT
6,42:PRINT W$(Y)
885 END FOR Y
887 END FOR X
890 AT 6,31:PRINT V1$(Z(2))
900 REMark "***** ROLL RIGHT AND
PICK RIGHT *****
910 FOR X=1 TO 20
915 FOR Y=1TO 4
```

```
920 AT 6,42:PRINT W$(Y)
925 END FOR Y
927 END FOR X
930 AT 6,42:PRINT V3$(Z(3))
940 INK 4:REMark "DO I HAVE 3 OF
A KIND
950 IF V$(Z(1))<>V1$(Z(2)) THEN
GO TO 1080
960 IF V1$(Z(2))<>V3$(Z(3)) THEN
GO TO 1080
970 IF V$(Z(1))<>"CHERRY" THEN GO
TO 990
980 AT 16,27:PRINT "YOU WIN
$6.00":M=M+6:GO TO 730
990 IF V$(Z(1))<>" PLUM " THEN GO
TO 1010
1000 AT 16,27:PRINT "YOU WIN
$20.00":M=M+20:GO TO 730
1010 IF V$(Z(1))<>"ORANGE" THEN
GO TO 1030
1020 AT 16,27:PRINT "YOU WIN
$50.00":M=M+50:GO TO 730
1030 IF V$(Z(1))<>"*BAR* " THEN
GO TO 1050
1040 AT 16,27:PRINT "YOU WIN
$100.00":M=M+100:GO TO 730
1050 INK 2:REMark "LEMONS
1060 AT 16,28:PRINT "LEMONS
LOSE!":M=M-3:GO TO 730
1070 REMark
1080 REMark "DO I HAVE CHERRIES
1090 IF V$(Z(1))<>"CHERRY" THEN
GO TO 1170
1100 IF V1$(Z(2))<>"CHERRY" THEN
GO TO 1150
1110 REMark
1120 REMark "2 CHERRIES
1130 AT 16,27:PRINT "YOU WIN
$3.00":M=M+3:GO TO 730
1140 REMark
1150 REMark " 1 CHERRY
1160 AT 16,26:PRINT "YOU WIN
$1.50":M=M+1.5:GO TO 730
1170 REMark
1180 INK 4:REMark " GOT SCHMALTZ
1190 ON Z(3) GO SUB
1210,1220,1230,1240,1250,1260,12-
70
1200 GO TO 730
1210 AT 16,25:PRINT "TRY BINGO
INSTEAD":RETurn
1220 AT 16,25:PRINT "HA HA YOU
LOSE":RETurn
1230 AT 16,26:PRINT "ZILCH -
ZERO":RETurn
1240 AT 16,25:PRINT "TRY AGAIN
SUCKER":RETurn
1250 AT 16,25:PRINT "TRY VEGAS
INSTEAD":RETurn
1260 AT 16,25:PRINT "YOU GOT
SCHMALTZ":RETurn
1270 AT 16,25:PRINT "BACK TO STAR
TREK":RETurn
1280 AT 16,26:PRINT "BYE-BYE ";N$
1290 A$=INKEY$:IF A$="" THEN GO
TO 1290
1300 STOP
1310 CLS
1320 GO TO 1420
1321 FOR J=2 TO 22
1330 AT 2,2:PRINT CHR$(36):AT
2,77:PRINT CHR$(36)
1340 AT 23,2:PRINT CHR$(36):AT
23,77:PRINT CHR$(36)
1350 AT J,2:PRINT CHR$(36)
1360 AT J,77:PRINT CHR$(36)
1370 NEXT J
1380 FOR J=3 TO 77
1390 AT 2,J:PRINT CHR$(36)
1400 AT 23,J:PRINT CHR$(36)
1410 NEXT J
1420 INK 2:AT 4,4:PRINT "W E L C
O M E  T O . . ."
1430 AT 8,30:PRINT "S A N Y O ' S
C A S I N O"
1440 INK 4:AT 15,4:PRINT "Today
you will lose your money at
SANYO'S ";
1441 PRINT"famous slot machine."
1450 AT 16,4:PRINT "You have been
given a credit line of $100.00.
";
1451 PRINT"Therefore at $3 a pull
you"
1460 AT 17,4:PRINT "have a
minimum of 33 pulls!"
1470 INK 2:AT 20,4:PRINT "By the
way what is your name ";:INPUT N$
1480 RETurn
1490 DEFine PROCedure amt
2000 INK 4:AT 21,24:PRINT "YOU
NOW HAVE  ";:INK 7:PRINT'$'; M
2010 END DEFine
```

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Z88 Technical Specification

Design Four-chip design—CPU, ROM, RAM, gate array.

CPU Z80 (CMOS).

ROM 128K containing operating system and applications software together with BASIC/Assembler.

RAM 32K expandable via 32K, 128K, 512K and 1 megabyte to a maximum 3 megabytes, battery-backed from the computer.

EPROM Up to 3 megabytes removable storage capacity via 32K, 128K, 512K and 1 megabyte packs.

Applications software Pipedream word-processing and spreadsheet applications. Database. Calculator, diary, calendar, clock, alarms, printer editor, come as 'pop-down' screens.

Operating system OZ operating software, allows task-switching between applications without loading or exiting.

Language/Assembler Powerful BASIC.

Display 8 × 106 characters 'supertwist' LCD. Includes 8 × 80 working area, page map (shows where you are on a complete page), battery strength, alarm status.

Power 4 AA batteries provide 20 hours active computing or one year on standby.

Ports Three for memory-pack expansion, RS232 for popular printers and data import/export.

CAMBRIDGE Z88

Z88 Accessories

RAM Packs Require no external power, and are available with 32K, 128K, and 512K capacity. 1 megabyte RAM packs available soon.

EPROM Packs Solid-state permanent storage, available in 32K, 128K and 512K. 1 megabyte EPROM packs available soon.

EPROM Eraser Z88 EPROM Eraser, completely deletes EPROM data—leaves you with a blank EPROM pack, ready for re-use.

PCLINK Consisting of software diskette and RS232 serial cable, allows transfer and receipt of ASCII files between the Z88, and an IBM or compatible PC. Also converts Z88 Pipedream files into either Wordstar or Lotus 1-2-3 files.

Links for other PCs available shortly.

Serial Printer Cable connects the Z88 to any printer with a standard serial port.

Parallel Printer Cable connects the Z88 to any printer with a standard parallel port.

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